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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/695,751 | 10/30/2003 | Shyi-Kaan Wu | 3624-0133P | 6175 |

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BIRCH STEWART KOLASCH & BIRCH
PO BOX 747
FALLS CHURCH, VA 22040-0747

| EXAMINER | |
|---|---|
| KOEHLER, CHRISTOPHER M | |

| ART UNIT | PAPER NUMBER |
|---|---|
| 3726 | |

DATE MAILED: 08/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 10/695,751 | WU ET AL. | |
| | Examiner | Art Unit | |
| | Christopher M. Koehler | 3726 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *01 June 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1-13* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-13* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

## DETAILED ACTION

### *Claim Objections*

1. Claim1 is objected to because of the following informalities: "soldying" should be changed to --solidifying--. Appropriate correction is required.

### *Claim Rejections - 35 USC § 103*

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Letters (US Patent No. 2,891,138) in view of Sikka et al (US Patent No. 6,667,111 B2).

*Claim 1:*

Letters teaches method for quick joining of golf club head members using high frequencies comprising the steps of disposing a metallic filler (15) between the golf club head members (7 and 7A), using a heating source of high frequency emissions to melt the metallic filler material and solidifying the metallic filler disposed between the golf club head members thereby joining the golf club members (col. 2, line 46-col. 3, line 16). Letters does not teach a heating source of infrared rays.

Sikka teaches a heating source of infrared rays capable of melting a metallic filler disposed between golf club members (col. 2, lines 4-16).

It would have been obvious to one of ordinary skill in the art at the time of invention to apply the infrared heating source of Sikka to the golf club joining method of

Letters since infrared heating is faster and more focused than high frequency. Furthermore, Letters suggests in column 3, lines 51-53, "it will be appreciated that H.F. heaters of other strengths and types may be employed", and infrared is a high frequency source of heat.

*Claim 2:*

Letters teaches that at least one of the golf club head members is a main head body (figure 3).

*Claim 3:*

Letters teaches that the golf club head member is made of stainless steel or brass (col. 1, lines 23-26). Furthermore, the examiner takes official notice that it is well known in the art of golf club fabrication to use a wide variety of metals and alloys. It would have been obvious to one of ordinary skill in the art at the time of invention to chose any of the materials of claim 3 based on their desired weight and ball striking properties.

*Claims 4 and 5:*

Sikka teaches that the IR heating source is capable of heating rates up to 200°C/second (col. 5, lines 52-53).

*Claim 6:*

Applicant has recited a wavelength range of the infrared waves as being between 0.76 and 1,000 μm. However, this covers the *entire* range of infrared rays in the electromagnetic spectrum. Since the heating source of Sikka et al. is an IR heating source, it is inherent that the wavelength of IR rays generated thereby will fall within the

claimed range. Note also that Sikka et al. disclose in column 6, lines 31-34, that it is possible to tune the IR radiation to any particular IR wavelength based upon the results desired for the material being heated.

*Claims 7 and 8:*

Letters teaches that the club head and the shaft are both made from metal (col. 1, line 65). The conventional shaft material of golf clubs is stainless steel and the head of the golf club of Letters can be either stainless steel or brass (col. 1, lines 23-26). Therefore Letters teaches that the members can be made of either similar or dissimilar categories of alloys.

*Claims 9 and 10:*

Sikka teaches that the infrared heating may take place in a vacuum or in inert atmosphere depending on the preferences of the user (col. 3, lines 22-26).

*Claim 11:*

Letters teaches that the metallic filler material is silver (Ag) based (col. 2, line 61).

*Claims 12 and 13:*

Sikka teaches interior surfaces that are coated with a highly reflective coating, specifically gold, and are positioned to reflect radiation form heat sources toward an object. These reflective surfaces are considered to be optical elements (mirrors).

## ***Response to Arguments***

4. Applicant's arguments with respect to claims 1-13 have been considered but are moot in view of the new ground(s) of rejection.

## ***Conclusion***

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher M. Koehler whose telephone number is (571) 272-3560. The examiner can normally be reached on Mon.-Fri. 7:30A-4:00P.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Bryant can be reached on (571) 272-4526. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

CMK

DAVID P. BRYANT
SUPERVISORY PATENT EXAMINER